

IN THE CLAIMS:

Please cancel without prejudice Claims 1-16.

Please add the following newly drafted Claims 17-20.

1 17. (New) An apparatus for determining the elements in a semiconductor wafer,
2 comprising:

3 a conductor member having an aperture, the conductor member has a size to
4 extend across the semiconductor wafer and contact one surface of the semiconductor wafer to
5 enable an application of uniform potential to be applied to the entire surface of the
6 semiconductor wafer to be sampled;

7 means for mounting the semiconductor wafer on the conductor member;

8 a glow discharge chamber unit having an anode and an opening adjacent the
9 aperture of the conductor member;

10 means for exerting a force on the semiconductor wafer to seal at least a portion of
11 the surface to be sampled to the glow discharge chamber unit opening when mounted on the
12 conductor member;

13 means for providing a sputtering gas to the glow discharge chamber unit;

14 means for providing an electrical charge of sufficient power to the conductor
15 member to uniformly charge the surface of the semiconductor wafer as a cathode to the anode,
16 whereby a glow discharge emission is created as the semiconductor wafer is sputtered; and

17 means for providing a spectroscopic analysis of the light from the glow discharge
18 emission to determine the elements in the semiconductor wafer.

1 18. (New) The apparatus of Claim 17 wherein the conductor member is larger in size
2 than the semiconductor wafer.

1 19. (New) The apparatus of Claim 17, wherein the conductor member is resiliently
2 mounted to permit adjustable movement between the conductor member and the semiconductor
3 wafer when the semiconductor wafer is mounted on the conductor member.

1 20. (New) A system for determining the elements in a semiconductor sample,
2 comprising:

3 a semiconductor wafer;

4 a conductor member, the conductor member has a size to extend across a first
5 surface of the semiconductor wafer to enable an application of uniform potential to be applied to
6 a surface of the semiconductor wafer to be sampled;

7 means for mounting the first surface of the semiconductor wafer on the conductor
8 member;

9 a glow discharge chamber unit having an anode and an opening adjacent the
10 conductor member;

11 means for exerting a force on the semiconductor wafer to seal at least a portion of
12 a second surface of the semiconductor wafer to be sampled to the glow discharge chamber unit
13 opening when mounted on the conductor member;

14 means for providing a sputtering gas to the glow discharge chamber unit;

15 means for providing an electrical charge of sufficient power to the conductor
16 member to uniformly change the first surface of the semiconductor wafer as a cathode to the

17 anode, whereby a glow discharge emission is created as the semiconductor wafer is sputtered;
18 and

19 means for providing a spectroscopic analysis of the light from the glow discharge
20 emission to determine the elements in the semiconductor wafer.